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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MONICA R. NASSIF and PAMELA HELMS

Appeal[1] 2009-013392
Application 09/659,502
Technology Center 1600

Decided: December 18, 2009

Before TONI R. SCHEINER, ERIC GRIMES, and LORA M. GREEN, *Administrative Patent Judges*.

GREEN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 31, 33-35, 37, 39, and 40. We have jurisdiction under 35 U.S.C. § 6(b).

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[1] This appeal is related to Appeal No. 2005-2378, decided December 29, 2005.

STATEMENT OF THE CASE

Claims 31, 33, and 34 are representative of the claims on appeal, and read as follows:

31. A method for providing aromatherapy to persons or animals within an ambient environment comprising directly applying a composition consisting of a liquid solution composition to an inanimate surface to effect a household function selected from the group consisting of surface cleaning, surface shining, degreasing, cleansing, dish washing with soaps, and wood finishing, the liquid composition comprising an aromatherapeutic concentration of an aromatherapeutic essential oil of 0.1 to 20% by weight of the liquid composition, completing the household function, allowing the aromatherapeutic essential oil to remain within the ambient environment to effect aromatherapy on persons or animals within the ambient environment, the solvents in said liquid composition consisting essentially of materials selected from the group consisting of water and alcohols, wherein the pH of the composition is from 6.5-7.0.

33. The method of claim 31 wherein the composition comprises Tween 20 in a concentration of from 0.1% by weight to 5.0% by weight of the composition.

34. The method of claim 31 wherein the composition comprises from 10% to 40% by total weight of the composition of a long chain aliphatic alcohol.

The Examiner relies on the following evidence:

McCue US 5,403,587 Apr. 4, 1995

Remington's Pharmaceutical Science, 1308, 1312, and 1314 (18th ed. 1990).

We affirm.

ISSUE

The Examiner concludes that claims 31, 33-37, 39, and 40 are obvious over the combination of McCue and Remington's.

Appellants contend that the Examiner has not established a prima facie case that the combination of references cited by the Examiner renders obvious the method of claims 31, 33-37, 39, and 40.

Thus, the issue on appeal is: Have Appellants demonstrated that the Examiner erred in combining McCue and Remington's to arrive at the claimed method?

FINDINGS OF FACT

FF1 According to the Specification, "[t]he present invention relates to the field of household systems and compositions for general application around the home or workplace and their use to provide aromatherapeutic and environmentally friendly materials for use around the home or workplace." (Spec. 1.) The composition comprises "the household product carrier base, with the essential oil as both an active agent . . . and as an aromatherapeutic ingredient." (*Id.* at 12.)

FF2 With respect to the carrier base, the Specification teaches:

> The compositions useful in the practice of the combined household functions and aromatherapy comprise the oils in combination with carrying agents, including both liquid carriers and blends/solutions of liquid and solid-forming carriers (e.g., polymer binders, waxes, high viscosity agents, volatility reducing agents such as low odor solvents[), sic] that are less volatile than the essential oils and will retard or control their volatilization. Other additives such as stabilizers (e.g., ascorbic acid for oxidation stability, UV absorbers for UV stability, free

> radical scavengers for storage stability, etc.; including but not limited to antioxidants, methylparaben, ethylparaben, hydroquinones, betaines, chelating agents particularly for metal ion scavenging, and the like), colorants, aroma modifiers, aroma masking agents, thickening agents (both organic, polymeric, inorganic, natural, and synthetic thickeners such as glycerin, acrylic polymers, corn starch, silica, kaolin clay, bentonite, salt, higher molecular weight oils, oil soaps), eutectic agents to retard volatilization, surfactants (e.g., to assist in liquid film spreading and flow properties; including but not limited to anionic surfactants, cationic surfactants, non-ionic surfactants, Zwitterionic surfactants, and mixtures thereof), sudsing and degreasing agents, solubilizing agents, gels, cleansing or cleaning agents (e.g., ammonia-D for window solutions or ethanol for hygienic surfaces), etc.

(*Id.* at 20.)

FF3 The Examiner rejects claims 31, 33-37, 39, and 40 under 35 U.S.C. § 103(a) as being obvious over the combination of McCue and Remington's (Ans. 4).

FF4 The Examiner finds that McCue teaches a method of disinfecting a hard surface with a composition comprising 0.2 weight percent of an essential oil, 0.75-10% of a surfactant, and an alcohol (*id.*).

FF5 The Examiner also finds that McCue teaches that the pH of the composition may be between 1 and 12 (*id.*).

FF6 Specifically, McCue teaches that "certain essential oils which display antimicrobial efficacy are capable of being solubilized or dispersed when combined with appropriate amounts with water and a solubilizing or [a] dispersing agent," wherein the compositions may be used as hard surface sanitizers (McCue, col. 1, l. 67-col. 2, l. 5).

FF7 McCue teaches a composition that comprises:

> a) about 0.02 to about 5 weight percent of one or more essential oils capable of imparting antimicrobial properties when incorporated in a water carrier;
> b) about 0.10 to about 95 weight percent of a solubilizing or dispersing agent for the essential oil; and;
> c) sufficient water to make 100 weight percent.

(*Id.* at col. 3, ll. 10-18.)

FF8 McCue teaches that preferred solubilizing and dispersing agents include solvents and surfactants (*id.* at col. 4, ll. 10-11). McCue teaches that preferred dispersing agents "include various alcohols containing 1 to 6 carbon atoms, glycols, and glycolethers." (*Id.* at col. 4, ll. 12-18.) McCue teaches surfactants as solubilizing or dispersing agents, "because of their ability to act as a cleanser or detergent, are present in the preferred compositions of this invention." (*Id.* at col. 4, ll. 19-22.)

FF9 McCue teaches further that the pH of the composition may be between 1 to about 12, "but is dependent upon the quantity and type solubilizing agent used and essential oil." (*Id.* at col. 4, ll. 44-49.)

FF10 McCue also teaches that the compositions may be formed using conventional methods, such as by preparing an aqueous solution of the essential oil and solubilizing agent, and agitating until a dispersion or solution is formed (*id.* at col. 5, ll. 37-43).

FF11 McCue compares a composition containing an essential oil—thyme oil—, an alcohol—ethyl alcohol—, and a surfactant, with a composition that does not contain the essential oil (*id.* at col. 9, Example 4). The results are shown in Table IV, reproduced below:

TABLE IV

Microbiological Results
MICROBIAL REDUCTION ASSAY

	Thyme Oil	Ethyl Alcohol	Surfactant Standapol WAQ-LC	pH	Percent Reduction 5 Minute Contact *S. aureus*	*P. aeruginosa*	Activity
17	0.25	15.0	6.6	8.9	99.99	99.99	pass
D	---	15.0	6.6	9.0	93.0	50.00	fail

(*Id.*) The composition containing the essential oil was deemed to pass the test, while the composition that did not was deemed to fail the test (*id.*).

FF12 The Examiner notes that McCue does not teach a pH of 6.6 to 7.0, the use of a long chain aliphatic alcohol, nor does McCue teach the use of Tween 20 as the surfactant (Ans. 4).

FF13 The Examiner relies on Remington's for teaching that Tweens (polysorbate) are commonly used nonionic surfactants in pharmaceuticals and cosmetics (*id.*).

FF14 The Examiner concludes that since McCue teaches a pH that ranges over the claimed pH range, it would have been within the level of skill of the ordinary artisan to optimize the pH (*id.* at 5).

FF15 The Examiner further concludes that the use of Tween 20 as the surfactant would have been obvious as McCue teaches the use of various surfactants, and thus "employing any well-known pharmaceutically and cosmetically acceptable surfactant, including Tween 20, stearyl alcohol, or cetyl alcohol, would be considered simply employing obvious alternatives." (*Id.*)

PRINCIPLES OF LAW

The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the

claimed invention and the prior art; and (4) secondary considerations of nonobviousness, if any. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). The Supreme Court has recently emphasized that "the [obviousness] analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* at 416; s*ee also id.* at 421 ("A person of ordinary skill is also a person of ordinary creativity, not an automaton."). Moreover, an "[e]xpress suggestion to substitute one equivalent for another need not be present to render such substitution obvious." *In re Fout*, 675 F.2d 297, 301 (CCPA 1982). Thus, to those of ordinary skill in an art, it is generally obvious to alter a known product by substituting a known equivalent for one of its components. *See, e.g., Hotchkiss v. Greenwood*, 52 U.S. 248 (1850) (substitution of porcelain door knob in known process of making metal or wood door knobs held obvious); *In re Mayne*, 104 F.3d 1339, 1340 (Fed. Cir. 1997) ("Because the applicants merely substituted one element known in the art for a known equivalent, this court affirms [the rejection for obviousness]."); *Richardson-Vicks Inc. v. Upjohn Co.*, 122 F.3d 1476, 1483-84 (Fed. Cir. 1997) (The combination of ibuprofen and pseudoephedrine in a single dosage was "clearly suggested by the prior art including CO-TYLENOL®, which combined an analgesic with pseudoephedrine into a single tablet"; "[i]buprofen was a known analgesic that was interchangeable with either aspirin or acetaminophen.").

"[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456 (CCPA 1955); *see also In re Boesch*, 617 F.2d 272, 276 (CCPA 1980) (noting that determining the optimum values of result effective variables is ordinarily within the skill of the art). Moreover, the burden of demonstrating unexpected results rests on the party asserting them. *In re Klosak*, 455 F.2d 1077, 1080 (CCPA 1972).

ANALYSIS

Appellants argue that the claims have been limited to "consisting of a solution," and McCue[2] teaches an emulsion, which would not be considered a solution (App. Br. 10). Appellants argue that the Examiner has ignored the limitations that the pH be between 6.5 and 7.0, the use of long-chain aliphatic alcohols (chain length of at least 10) in claims 34, 35, 37, 39, and 40, and the use of Tween 20 as the complexing agent as required by clam 33 (*id.* at 10-11).

Appellants argue further that as shown in Table IV of McCue, the lower chain alcohol contributes 50% of the antimicrobial activity, and thus it would "not be obvious to remove the essential emulsion nature of [McCue] and optimize other ingredients to obtain an unexpected result." (*Id.* at 11.)

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[2] The Brief refers to "Petri," but as the Final Rejection mailed April 10, 2008, and the Examiner's Answer both refer to McCue, and as Appellants did not file a Reply Brief in response to the Examiner's Answer, the reference to "Petri" appears to be a typographic error, and Appellants were in fact referring to the McCue patent.

As to the use Tween 20, Appellants argue that "all additives are not equivalent, all additives are not useful in every possible generic category of useful compositions (e.g., surface cleaners), and the interaction of additives, especially an additive as uniquely structured as the cyclic Tween 20, cannot be predicted." (*Id.* at 10.) Thus, Appellants assert, the "rejection fails to provide a basis for destroying the underlying and required physical characteristic of [McCue] as an emulsion and to add the unique Tween 20 surfactant." (*Id.* at 11.)

Appellants' arguments have been carefully considered, but are not convincing. First, as to limitation that the pH of the composition be between 6.5 and 7.0, as noted by the Examiner, McCue teaches that the pH may be between 1 and 12. In addition, McCue teaches that the pH depends on the quantity and type of solubilizing agent used and essential oil, thus we agree with the Examiner that it would have been well within the level of skill of the ordinary artisan to optimize the pH depending on the ingredients used, such as the solubilizing agent and the essential oil. Moreover, we agree with the Examiner (Ans. 6) that McCue meets the claims' requirement for a solution, as the McCue teaches that solubilizing or dispersing agents are used to solubilize the essential oil to form solutions and dispersions (FF8, FF10).

As to the use of a long chain aliphatic alcohol as a solubilizing agent as required by claims 34, 35, 37, 39, and 40, McCue generically teaches the use of an organic solvent as such an agent, and a short chain alcohol, such as ethanol, is just a preferred example of such an agent. As noted by the Examiner, Remington's teaches that long chain alcohols such as stearyl

alcohol and cetyl alcohol are well known surface active agents and are known to be safe for use on skin. Thus, we conclude that it would have been well within the level of skill of the ordinary artisan to use such long chain alcohols as the solubilizing or dispersing agent in the composition of McCue. As to Appellants' arguments based on Table IV of McCue, McCue does not teach that the antimicrobial activity of composition B is due to the presence of ethyl alcohol. In addition, composition D includes a surfactant, which McCue recognizes has the ability to act as a cleanser or detergent. Thus, we disagree with Appellants that Table IV in essence teaches away from using longer chain alcohols such as stearyl alcohol and cetyl alcohol. Finally, while Appellants appear to be arguing that the use of longer chain alcohols provides unexpected results, they have not provided or pointed to any evidence to support that apparent assertion.

As to the use of Tween 20 as the surfactant, again we agree with the Examiner that McCue teaches the use of surfactants generally, and Remington's teaches that Tween 20 is a surfactant that is known in the art and used in cosmetics and pharmaceuticals, and thus safe for use on the skin. In addition, while Appellants assert that "all additives are not equivalent, all additives are not useful in every possible generic category of useful compositions (e.g., surface cleaners), and the interaction of additives, especially an additive as uniquely structured as the cyclic Tween 20, cannot be predicted," the Specification teaches the use of surfactants generally, thus supporting the Examiner's conclusion that the use of a known surfactant, such as Tween 20, would have been obvious to the ordinary artisan. (App. Br. 10.)

CONCLUSION(S) OF LAW

We conclude that Appellants have not demonstrated that the Examiner erred in combining McCue and Remington's to arrive at the claimed method.

We thus affirm the rejection of claims 31, 33-37, 39, and 40 under 35 U.S.C. § 103(a) as being obvious over the combination of McCue and Remington's.

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv)(2006).

AFFIRMED

cdc

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